

H 33 574

E. I. du Pont de Nemours and Company

Claims:

5

1. Process for the production of a base lacquer/clear lacquer two-coat lacquer system and/or a transparent sealing coat on the outer finishing coat of a lacquered surface of a substrate, in which a clear lacquer coat cured by radical polymerisation is applied to a previously applied colour- and/or effect-providing base lacquer coat and/or a transparent coating agent cured by radical polymerisation is applied to the lacquered surface of a substrate and cured by the action of high-energy radiation, characterised in that a transparent coating agent is used to apply the outer clear lacquer coat and/or sealing coat, of which the resin solid consists of:

10

15

- I. 70 to 100 wt.% of one or more radically polymerisable oligo- and/or prepolymers containing olefinically unsaturated groups and
- II. 0 to 30 wt.% one or more radically polymerisable reactive thinners having olefinically unsaturated groups with calculated molar masses of less than 500 each,

20

wherein 75 to 100 wt.% of component I is an aliphatic urethane (meth)acrylate with an average (meth)acryloyl functionality of 3 to 4.5 per molecule and a calculated molecular mass of at least 826, which can be obtained by reacting acyclic aliphatic diisocyanates with 8 C atoms and/or polyisocyanates derived from such diisocyanates with one or more low-molecular aliphatic compounds, which have one or more hydroxy groups and at the same time one or more (meth)acryloyl groups, and optionally with one or more low-molecular aliphatic diols and/or polyols.

25

2. Process according to claim 1, characterised in that the resin solid of the transparent coating agent consists of:
 - I. 90 to 100wt.% of one or more radically polymerisable oligo- and/or prepolymers containing olefinically unsaturated groups and
 - II. 0 to 10 wt.% of one or more radically polymerisable reactive thinners containing olefinically unsaturated groups with calculated molar masses of less than 500 each.
3. Process according to claim 1 or 2, characterised in that methyl pentane diisocyanate (MPDI) and/or hexane diisocyanate (HDI) are used as acyclic aliphatic diisocyanates with 8 C atoms and polyisocyanates with carbodiimide groups, allophanate groups, isocyanurate groups, uretdione groups and/or biuret groups are used as the polyisocyanates derived from them.
4. Process according to claim 3, characterised in that tris-(6-isocyanatohexyl)-biuret and/or the isocyanurate derived from HDI is used as the polyisocyanate.
5. Process for the production of a sealing coat according to one of claims 1 to 4, characterised in that the transparent sealing coat is applied to a single-coat finishing lacquer coat or to the outer finishing lacquer coat or outer clear lacquer coat of multi-coat lacquers.
6. Process according to any one of claims 1 to 5, characterised in that it is used for lacquering and/or sealing motor vehicles or motor vehicle parts.
7. Process according to any one of claims 1 to 6, characterised in that the sealing coat is applied to areas of the surface of a lacquered substrate that are particularly subject to scratching.

8. Process according to claim 7, characterised in that the sealing coat is applied to areas near the locks, door handles, door entrances, loading edges, roof and/or back of a motor vehicle.
- 5 9. Substrate, lacquered according to the process of any one of claims 1 to 8.

APP A >